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INFO RUEHZU/ASIAN PACIFIC ECONOMIC COOPERATION PRIORITY
RUEHOO/CHINA POSTS COLLECTIVE PRIORITY
RUEHZN/ENVIRONMENT SCIENCE AND TECHNOLOGY COLLECTIVE PRIORITY
RUEHKO/AMEMBASSY TOKYO PRIORITY 0905
RUEHUL/AMEMBASSY SEOUL PRIORITY 0371
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C O N F I D E N T I A L SECTION 01 OF 06 TAIPEI 001453

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SENSITIVE

STATE FOR EAP/TC, IO, OES/EGC, OES/ENV, OES/PCI, OES/STC,
EPA FOR KASMAN, TROCHE AND HARRIS, DOE FOR INTERNATIONAL,
COMMERCE FOR 4431/ITA/MAC/AP/OPB/TAIWAN

E.O. 12958: DECL: 12/10/2019
TAGS: [SENV](#) [ECON](#) [ENRG](#) [EINV](#) [TRGY](#) [PREL](#) [TSPL](#) [TW](#) [XE](#)
SUBJECT: TAIWAN'S GHG REDUCTION STRATEGY FACES CARBON
TRADING HURDLE

REF: A. TAIPEI 1243
[1](#)B. TAIPEI 1093
[1](#)C. TAIPEI 937
[1](#)D. TAIPEI 784
[1](#)E. TAIPEI 487
[1](#)F. TAIPEI 302

Classified By: Deputy Director Eric Madison for reasons 1.4 (b) and (d)
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[1](#)1. (C) SUMMARY: Taiwan is one of the world's largest per capita emitters of greenhouse gases (GHG). Officials, academics, and civil society have found common cause in the idea of creating a "low-carbon society" in Taiwan, motivated by political, economic, and disaster mitigation goals. The central authorities have proposed a series of GHG reduction targets that appear obtainable in the near-term, but would require ambitious reductions from 2025 onward. The current slate of proposals to achieve GHG reductions chiefly covers energy production, the industrial sector, transportation, and buildings. Individuals familiar with the GHG reduction policy doubt that it would be able to meet Taiwan's stated goals unless it is augmented with the use of carbon offset credits. However, Taiwan's exclusion from UN climate change agencies creates an obstacle to engaging in carbon trading, and this situation has led the Taiwan Environmental Protection Administration (TEPA) to formulate an unwieldy and possibly unworkable carbon trading plan. Academics and civil society groups have argued that the authorities should instead focus on implementing an effective energy tax to address artificially low energy and fuel prices, as opposed to making plans to engage in "speculative" carbon trading. Taiwan has taken some useful steps towards implementing policies to stem GHG emissions, but could be encouraged to go further, and to use the expertise it has gained from 16 years of bilateral cooperation with the U.S. to become a regional model for environmental management. Active U.S. support for

Taiwan's meaningful participation in international environmental fora could pay dividends in reducing GHGs, building cross-Strait cooperation, and opening commercial opportunities for U.S. businesses. END SUMMARY.

SMALL ISLAND, BIG POLLUTER

12. (SBU) On a per capita basis, Taiwan ranks among the world's twenty largest greenhouse gas (GHG) emitters, ahead of South Korea, Japan, and the OECD average. Although the island is home to only 0.35 percent of the world's population, it accounts for 1 percent of global emissions, and Taiwan's annual GHG emissions have more than doubled over the last twenty years. Under a "business-as-usual" trajectory, emissions will double again by 2025, reaching over 530 million tons of CO2 equivalent emitted annually. The bulk of Taiwan's GHG emissions come from the energy sector (65 percent), the industrial sector (17.6 percent), and the transportation sector (13.6 percent). Energy sector emissions are overwhelmingly the result of burning fuel to generate electricity. A deeper and more accurate analysis of Taiwan's emissions sources would therefore look at a sectoral breakdown of emissions after electricity allocation. In this analysis, Taiwan's emissions sources are as follows: industrial sector (53 percent), residential sector (15 percent), transportation sector (14 percent), service sector (14 percent).

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WHY BUILD A LOW-CARBON SOCIETY?

13. (SBU) Taiwan officials, academics, and civil society groups have all begun using the phrase "low-carbon society" when describing their vision for Taiwan's future development. President Ma Ying-jeou and Premier Wu Den-yih in recent months have made public statements reaffirming that Taiwan is concerned about global warming and emphasizing that Taiwan wants to actively contribute to reducing global GHG emissions. Taiwan's Environmental Protection Administration (TEPA) stated in its official position paper on the subject that: 1) climate change is a global problem, and Taiwan, as "responsible global citizen," has a duty to act; and 2) reducing GHG emissions and sharing Taiwan's environmental management experience with the rest of the world will bring positive international attention to Taiwan.

14. (SBU) Taiwan environmental experts, meanwhile, have offered scientific arguments relating climate warming to increasingly intense rainfall and rising sea levels, both of which could negatively affect Taiwan. Intense rainfall such as that experienced during the August 8 Typhoon Morakot disaster would lead to flooding and mudslides in many areas of the island. Morakot caused over 700 deaths and an estimated USD 3 billion in damage, and climatologists here predict more such episodes of intense rainfall if the climate continues to warm. In terms of sea level, a one meter rise would flood an area of roughly 270 square kilometers, affecting industrial centers and towns along Taiwan's highly developed western coast. Political figures in Taiwan, following Typhoon Morakot, have begun to regularly link climate change with natural disasters, and the authorities have tended to portray promotion of the low-carbon society concept as taking positive action on the issue of disaster preparedness.

15. (SBU) Industrial development is another motive driving some of the low-carbon society proponents. Taiwan authorities have launched a multi-billion USD investment plan to develop "green technology" industries, such as photovoltaic cells, LEDs, and electric vehicles. Taiwan hopes that with increased global attention to alternative

energy and low-emissions technologies, the island can leverage existing competitive advantages in advanced electronics manufacturing to capture market share. Economic planners have estimated Taiwan's green industry development plan could create 110,000 new jobs and bring over USD 7 billion in investment to Taiwan over the next five years. Although it is not clear that producing green goods in Taiwan will actually lower the island's own GHG emissions (because most of these goods are likely to be exported), the green industries development plan is moving forward with widespread official and corporate support, and is cited by the authorities as an important part of Taiwan's transformation into a low-carbon society.

SETTING EMISSIONS TARGETS

16. (C) Taiwan developed a Sustainable Energy Policy Framework in 2008, which laid out a plan to reduce GHG emissions to 2008 levels between 2016-2020, to 2000 levels by 2025, and to 50 percent of 2000 levels by 2050. In early 2010, Taiwan's Legislative Yuan (LY) is expected to pass the landmark Greenhouse Gas Reduction Act (GHGRA), which will codify those targets and mandate emissions caps. Senior

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administration officials and TEPA stepped up their public support for the bill in the weeks leading up to the COP-15 meeting in Copenhagen, and have reportedly reached a consensus with the LY to harmonize the GHGRA to the conclusions of the COP-15 meetings. The GHGRA was first submitted to the LY in 2006, but languished because of opposition from large polluters like CPC Taiwan and Formosa Plastics.

17. (C) Senior researchers at Academia Sinica who reviewed Taiwan's GHG reduction targets at the request of President Ma told us that the 2016-2020 target is "soft," and could be easily achieved. To hit the 2025 target, however, Taiwan would need to cut 310 million tons of CO2 equivalent from its business-as-usual trajectory, which the researchers at Academia Sinica tell us would be extremely difficult. President Ma Ying-jeou, if re-elected, would complete his second term in 2016, thus leaving the difficult work of GHG reductions to a successor, the academics noted. They added that the GHGRA does not define clearly enough how emissions caps would be allocated, and also allows room for Taiwan authorities to essentially scrap the plan if it negatively affects corporate/industrial interests.

ARE THE TARGETS ATTAINABLE?

18. (C) TEPA and the Bureau of Energy (BOE) have described a multi-pronged strategy for achieving the island's GHG reduction targets. The first and most important aspect of the strategy focuses on increasing the use of alternative and nuclear energies and decreasing energy intensity (i.e., the amount of energy used per unit of GDP). Taiwan's much-delayed fourth nuclear power plant is expected to come on-line in 2011 with two reactor units producing 1,350 MWe each, increasing Taiwan's nuclear power supply by roughly 50 percent. Contacts in the nuclear field told us they believe President Ma will also add reactors to existing nuclear sites, and nuclear power could be expanded significantly in this way without undertaking the potentially difficult political task of building new plants. However, a leading Taiwan academic and advisor to Taiwan EPA noted privately that even if each existing nuclear site runs its full complement of reactors, nuclear energy will only be able to supply 25 percent of Taiwan's projected 2025 power needs (compared to 18 percent in 2008).

19. (C) For alternative energy, BOE has estimated that

decreasing hardware costs and public subsidies will help Taiwan increase its share of power produced from alternative sources from 0.4 percent in 2008 to 15 percent in 2025. Taiwan EPA contacts privately doubt that alternative sources could supply more than 8 percent of Taiwan's energy needs by 2025. These contacts also note that although the island's Renewable Energy Development Act (REDA) went into effect this November with the goal of incentivizing energy providers to invest in a wide range of renewable energy sources, the authorities have not yet set wholesale prices for Taiwan's utilities to purchase renewable energy. Until feed-in tariffs for renewable energy are set at levels similar to those in South Korea, for instance, TEPA experts do not believe there will be significant demand for renewable energy in Taiwan. On efficiency, from 2001-2008, energy intensity in Taiwan improved by 1.52 percent per year, leaving the island with lower energy intensity than the U.S. and South Korea in 2008, but still higher than Japan, Germany, and the UK. Both TEPA and BOE have estimated as part of their GHG

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reduction projections that Taiwan will be able to register 2 percent annual gains in energy intensity moving forward, and will see a 50 percent improvement by 2025.

¶10. (SBU) The industrial sector is a second area targeted for significant GHG reductions. Taiwan has made efforts to reduce CO2 emissions from large emitters through voluntary programs spearheaded by TEPA. The most significant such program targets the top 100 industrial GHG emitters, which contribute up to 58 percent of all GHG emissions in Taiwan. As of 2009, 62 corporations were voluntarily reporting, including TaiPower, CPC Taiwan, TSMC, and AU Optronics, but other big emitters such as Formosa Plastics chose not to report. Taiwan's revised Energy Management Act, passed in June 2009, established guidelines for corporate energy use, and gave authorities the power to fine violators. There has been no published evidence to date on the effects this measure has had on emissions. Although the authorities have publicly noted that industrial emissions must be reduced to meet GHG reduction goals, environmental NGOs claim that official support for major GHG emitting projects such as the proposed eighth naphtha cracker plant clearly indicate the authorities are more concerned with economic development than with environmental protection.

¶11. (SBU) A third area targeted for GHG reductions is the transportation sector. TEPA and the Ministry of Economic Affairs (MOEA) have both formulated plans to address transportation sector emissions, but these plans are limited in scope and reach, focusing on promoting increased use of mass transit, bicycles, and promoting low-carbon transportation zones. MOEA is offering relatively small (USD 250-350 per unit) subsidies for electric scooter purchases. Municipalities in Taiwan have begun to purchase hybrid electric diesel buses, and there is also a plan to refit 90,000 taxis island-wide for liquid propane (LPG) use, but this effort has been stymied by a lack of LPG refueling facilities. Members of the Legislative Yuan (LY) have suggested extending commodity tax cuts for hybrid and electric vehicles, but have run into opposition from the Ministry of Finance, which argues commodity tax cuts should merely be the last in a "well-rounded" package of policies encouraging the purchase of hybrid and electric vehicles. The LY recently proposed a freeze on gasoline prices (note: Taiwan has among the lowest gasoline prices in the world. End note.) and also rejected a proposed "green tax" that would have raised gasoline prices by USD 2.89 per gallon over the next ten years.

¶12. (SBU) The residential and commercial sector is a fourth area receiving increased attention as part of Taiwan's GHG reduction strategy. Taiwan's Ministry of Interior (MOI) created a green building certification program, requires green building design for all new public buildings, and has established a green materials evaluation program. MOI has

also incorporated a mandatory level of green building design aspects into the building code, thus requiring all new buildings to be constructed greener. However, contacts in the region told us MOI's budget for green building promotion and oversight is small, and the program would be more successful if scaled up and expanded to include existing buildings, which represent 97 percent of Taiwan's building stock.

CARBON TRADING IS THE KEY

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¶13. (C) Taiwan's current slate of carbon reduction policies is unlikely to meet the island's GHG reduction goals for 2025 and beyond, according to contacts at TEPA, BOE, and in academia. Environmentalists had high hopes that a proposed Energy Tax would lead to changes in energy consumption and provide a strong complement to Taiwan's other GHG reduction plans, but the bill was shelved in October in the face of stiff corporate opposition. Premier Wu noted there was no "timetable" for an energy tax, and the central authority would not institute any such tax until the economy had "recovered." In light of Taiwan's artificially low energy prices and concerns that projected improvements in energy efficiency and the expansion of alternative energies will not provide sufficient GHG reductions to meet the 2025 goal, TEPA, BOE, and academic contacts have all stressed that Taiwan must be able to participate in carbon trading markets.

¶14. (C) Identifying a carbon trading platform has been an important motivating factor behind Taiwan's efforts this year to join the UNFCCC, according to recent Ministry of Foreign Affairs and TEPA non-papers. These non-papers argue that the inability to participate in the UN's Clean Development Mechanism, for instance, will "have a severe impact on Taiwan's industrial development." Because of Taiwan's inability to participate in UN climate bodies, TEPA has developed a complicated plan to acquire Certified Emissions Reductions from the Clean Development Mechanism through-public private partnerships. To this end, Taiwan plans to choose one or multiple UNFCCC Annex-I countries as operational bases, and then establish proxy organizations to open accounts registered in those countries to acquire and manage carbon credits. TEPA would possibly need to coordinate with the Ministry of Foreign Affairs to sign cooperative agreements with the Annex-I country(ies) in question, and TEPA would need to implement a double-accounting procedure to keep one set of books for logging carbon credit purchases and cancellations in the registered foreign account and another set of books that would be maintained and managed domestically by TEPA.

¶15. (C) This plan, according to U.S. experts in the field who have spoken extensively with TEPA, would be open to fraud, and would also be difficult to maintain. A better option, these experts noted, would be to find a country with an open registry system like the UK, and use credits in that account to back credits issued by TEPA in Taiwan, analogous to using gold to back currency. Unfortunately, Taiwan authorities appear committed to their home-grown plan, and have shown little flexibility or desire to consider more direct or simpler methods, despite interaction with and training by U.S. experts. Meanwhile, local environmental groups have criticized plans to engage in any form of offset purchasing, arguing that the trade in carbon will lead to "speculative bubbles," and urging TEPA to focus on reviving and lobbying for the energy tax.

COMMENT: LEVERAGING OUR WORK

¶16. (C) Taiwan produces more than its share of emissions on

a per capita basis, but has also publicly stated a clear desire to create a low-carbon society. Some of the strategies the authorities are employing to this end are well-conceived and will likely make a difference in Taiwan's energy consumption and emissions, while other strategies are little more than thinly-veiled industrial promotion efforts that are not likely to make much of a difference at all in

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the island's emissions. Nonetheless, there is an obvious "green" mindset that has emerged here among policy makers across the political spectrum, and Taiwan's advanced scientific and technological base, combined with over 15 years of bilateral cooperation with U.S. EPA, have given the island a strong foundation in environmental management. Considering the long history of U.S. work here on environmental management, and the global focus on climate change, now would be an ideal time to strengthen and expand our cooperation in this area with Taiwan, with the goal of making Taiwan a regional "hub" for excellence in environmental management. This approach could be particularly useful in terms of the PRC, where Taiwan academics in environmental fields have strong professional and personal ties. Increased cross-Strait cooperation in the field of environmental management/GHG reduction could serve as both a confidence building measure, and could also provide a way to transfer to the PRC the skills and knowledge the U.S. has shared with Taiwan over the past 16 years of environmental cooperation.

17. (C) In addition, the U.S. should continue to support Taiwan's meaningful participation in international climate change fora. Finding a reasonable and efficient means for Taiwan to engage with the rest of the world on these important issues, including carbon trading, would help reinforce Taiwan's own progress towards making GHG reductions. Moreover, by supporting Taiwan's ability to stick to its emissions targets, U.S. green technology companies could find partners, and possibly customers, in Taiwan as the island looks to meet its reduction goals.
STANTON